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ABSTRACT

A resource kit for the teaching of listening comprehension in French at the beginning elementary level is represented by a teacher's guide and a handbook entitled "The Maple Sugar Industry." The guide offers sample activities and lesson plans, as well as a complete procedure for conducting a listening comprehension test. Instructions are given for the use of a filmstrip/tape presentation. The theme of making maple sugar is illustrated with a folk legend--"Le Secret des erables"--and with pictoral aids, master copies for which are included in the teacher's guide. (JB)

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LE TEMPS DES SUCRES

Teacher's Guide

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MODULES PROJECT

The Modules Project is a research and development curriculum project that prepares multimedia classroom materials for teaching French as a second language in elementary and secondary schools. The project has three main purposes: firstly, to be of immediate help to teachers by developing modules as supplementary materials for current French programs: secondly, to initiate alternative approaches to present French-as-a-second language curriculum practices; and finally, to demonstrate a set of procedures for materials development that stress research on the information contained in a module and evaluation of modules prior to their publication.

A module is not a program. It is a unit or kit, independent of existing programs, which can be used very flexibly in response to a variety of teaching situations or to differences among students' needs. Each kit deals with one specific aspect of learning a language. A module can arouse interest in a topic, teach a linguistic feature, or provide an opportunity to use the language in an activity. All modules consist of a set of materials containing, for example, tapes, filmstrips, pictures or booklets. They also include a small handbook for teachers and students with background information, suggested classroom activities and a selected bibliography. Some modules are for use in class; others have been developed for group or individual use. Some are appropriate for a particular age and grade level; others have application over a wide range of ages and grades.

Instead of offering a fixed progression, modules can be compiled into a 'bank' of units which can be used in whatever way they suit a particular course, teacher, or set of students. Eventually, a bank of modules might be considered an alternative to an existing fixed sequential program. What modules can do today is to complement existing programs and make up for gaps and deficiencies without upsetting the pattern of the programs which are currently in use in the schools.

Topics for modules are chosen from among those aspects of second language learning that are lacking in or not sufficiently emphasized by current programs. The topics are carefully documented before modules are prepared to ensure that module content is authentic. All modules are classroom-tested in a number of schools across Ontario and subsequently revised before they are published.

The project is funded by the Learning Materials Development Fund, Ontario Ministry of Education and by the Ontario Institute for Studies in Education.

We hope that modules will help to vary the activities in French classes and assist the teacher in the time-consuming job of gathering additional materials and information.

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INTRODUCTION

In the teaching of French as a second language today there is a great need for varied teaching materials since students have different backgrounds, approach learning in diverse ways, and progress at varying rates. There is also a need for materials in French that are both interesting and worthwhile in their content.

The Modern Language Centre of the Ontario Institute for Studies in Education, aware of this requirement, has been developing small kits of teaching materials, or "modules." A module is a unit or kit, independent of existing programs, dealing with one specific aspect of learning a language. A module can arouse interest in a topic, teach a linguistic feature, or provide an opportunity to use the language in an activity. All modules consist of a set of materials in kit form containing, for example, tapes, filmstrips, pictures, or booklets. They also include a small guide for teachers and students containing background information, suggested classroom activities, and a selected bibliography. Some modules are for use in class; others have been developed for group or individual use. Some are appropriate for a particular age and grade level; others may be applied over a wide range of ages and grades.

Taken individually, most modules cover only a small part of the French curriculum at any one grade or level. But a number of modules, taken together, can constitute a valuable part of the French curriculum whereby students learn something of interest and value in French, or about French, and use the language in absorbing activities.

We have developed a number of modules for use at a particular grade or level. Teachers will thus be able to choose from among these modules and other materials when developing their programs, combining the units in whatever way would best suit a particular course, teacher, or group of students.

Hopefully modules will help to vary the activities in French classes while assisting the teacher in the time-consuming job of searching for and preparing additional materials and information.

OBJECTIVES

Le Temps des sucres is designed to provide students with a French listening experience. Students are not expected to have complete mastery of all the new vocabulary that they hear in the module; however, they are expected to have an aural understanding of the basic traditional and modern sugaring-off processes by recognizing key vocabulary items in conjunction with visual clues provided by the filmstrip, flashcards, and other materials in the kit. It is also hoped that the module will help further students' understanding of man and his environment.

TARGET AUDIENCE

Le Temps des sucres is designed for beginning students of French at the elementary school level. This module is recommended for ten- to twelve-year-old students who have had a minimum of two years of French instruction and who are acquainted with some of the basic procedures for making maple syrup.

COMPONENTS

- 1 Teacher's Guide – containing suggestions for use and selected references as well as a listening comprehension test
- 20 Flashcards
- 5 Sheets of Flannelgraph figures
- 1 Filmstrip
- 1 Cassette tape: Side 1 – taped narrative synchronized with filmstrip; Side 2: listening comprehension test
- 4 Handbook copies, *The Maple Syrup Industry*, containing information about the sugaring-off process
- 35 Master cards for *loto* activity
- 1 Sheet consisting of 20 teachers' *loto* cards

LINGUISTIC CONTENT

The vocabulary and structures chosen for *Le Temps des sucres* include items necessary for an authentic description of the sugaring-off process. A list of basic terms used can be found on page 11. Terms which may be unfamiliar to the student are used repeatedly in the module, from the flannelgraph introduction and presentation (pages 3 and 4) to the follow-up activities (page 5).

The taped narrative describing traditional and modern methods of making syrup is narrated by an eleven-year-old French-Canadian girl, Raïssa Quine, who was enrolled at a French-language school in Toronto.

SUBSTANTIVE CONTENT

The information in this module concerning maple

syrup production is based upon inquiry into the maple syrup industry of the Province of Quebec. Many similarities are to be found with other regions of Canada where maple syrup is made, particularly in Ontario and in the Maritime Provinces. However, the extent of the industry in Quebec, which produces 90 percent of Canada's maple syrup and two-thirds of the world's maple syrup, makes it of particular economic importance in the agriculture of that province. The maple syrup industry also plays an important cultural role in the rural life of Quebec, where sugaring-off time is an occasion for celebration with many family get-togethers and tourist-attracting festivals. For more information concerning the historical background and methods of syrup production, both modern and traditional, please refer to the handbook entitled *The Maple Syrup Industry*.

EVALUATION

An important aspect in the development of this module was evaluation. The kit was tried out by six teachers in fourteen French classes in the Toronto area. The grade levels were 4 to 6, so that age extended from 9 to 12, while the length of French study covered twelve to eighteen months. The following aspects were investigated:

1. Are the materials appropriate for the level of maturity of the students?
2. Are the materials appropriate for their level of ability in French?
3. Are the teacher materials adequate?
4. Do teachers and students enjoy working with the materials?
5. Would teachers consider making the materials part of their programs?
6. How much do students learn from the materials?

The first five aspects were mainly evaluated through classroom observation and teachers' reactions, and the last aspect by means of an achievement test (included in the teacher's guide and on the tape). Teachers reacted positively except for the second aspect: most teachers reported that the materials were too difficult for their students. As a result, part of the material was rewritten to reduce the level of difficulty and the target audience was redefined (minimum of two years of French instruction). Even though the difficulty level remains relatively high, all the teachers reported having few problems in adapting the materials to suit the level of ability of their students.

On the basis of the evaluation it was concluded that the objective of the module was realistic and attainable by the target audience.

In order to carry out a continuing evaluation of this module we have included an evaluation checklist, together with a return address envelope. We ask that you complete it and return it to us when you have taught the module, so that we can use your comments and suggestions in the event of any revisions to the module and for future modules of a similar type.

SUGGESTIONS FOR USE

The core of *Le Temps des sucres* is a filmstrip/tape presentation. The text of this presentation is found on pages 11 to 13. The introduction to the core is a short legend, *Le Secret des érables*, presented through narrative using flannelgraph figures. This flannelgraph story introduces some basic steps used in collecting and boiling sap to make syrup. All illustrated version of the narrative is found on pages 7 to 10 of the teacher's guide. These illustrations may suggest ways in which teachers can arrange the flannelgraph figures during the narration of the legend.

Twenty flashcards are also provided to facilitate the introduction of new vocabulary items. The sample lesson plans which follow may also assist teachers in overcoming difficulties presented by new vocabulary as well as develop student comprehension of the content of the module. These lesson plans indicate a few of the many ways this module can be presented, and the teacher should feel free to modify them according to the needs of the individual class.

As we mentioned in the Objectives, *Le Temps des sucres* is designed primarily as a listening experience. However, limited oral reproduction of some of the key items may be elicited from the students during the discussions preceding the flannelgraph and filmstrip presentations (see Lesson Plans, pages 3 to 5, for suggestions). Vocabulary items used in the *loto* activity may also be repeated orally during the game.

SAMPLE LESSON PLANS

Lesson 1: Introduction and Presentation of Flannelgraph Story

- *Preparation:*

Obtain a bottle of maple syrup and fill an empty bottle with lightly sugared water to simulate maple sap.

Five sheets containing the outlined figures featured in the legend have been included in the kit. Cut out the figures and back them with flocking which will adhere to a flannel board surface (velcro would be best), or with magnetic tape if you have a blackboard to which this will adhere. The illustrations on pages 7 to 10 can be used as a guide for cutting out the figures. You may wish to remove these pages from the teacher's guide and put them inside a folder with the title written in large letters on the outside in order that the legend can be presented as if it is being read from a book; if so, please cut along the line indicated on the pages.

- *Introduction:*

Use flashcards to introduce and teach "un érable" and "le sirop d'érable." For example: *Qu'est-ce que c'est? (C'est un arbre); Regardez la feuille. Quelle sorte d'arbre est-ce? (C'est un érable); Il y a du sirop dans la bouteille. Quelle sorte de sirop est-ce? (C'est du sirop d'érable),* and so on.

Show the bottle of maple syrup: *Aimez-vous le sirop d'érable?* Discuss. *D'où vient le sirop d'érable?* Show the bottle of sugared water and hold up the flashcard of "un érable" indicating the movement of sap up the trunk (this can be demonstrated by a simple diagram on the blackboard). *Dans l'érable, il y a de l'eau d'érable. On fait le sirop d'érable de l'eau d'érable.* Allow students to examine the bottle of sugared water and to compare its color, smell, and taste with that of the bottle of maple syrup: *L'eau d'érable est sans couleur / le sirop d'érable est brun. L'eau d'érable est sans odeur / le sirop d'érable sent bon. L'eau d'érable est sucrée / le sirop d'érable est beaucoup plus sucré; c'est délicieux!*, and so on.

- *Presentation of Flannelgraph Story:*

Introduce the legend, which suggests one way that the Indians may have discovered maple syrup: *Qui a découvert le sirop d'érable? Ecoutez cette légende indienne*. The flannelgraph figures can be assembled as shown on pages 7 to 10 while recounting the section of the story which accompanies each picture. Feel free to modify the narrative as you find necessary, but try to maintain the basic story line throughout. Gestures can add drama to the narrative as well as assist student comprehension (for example, arm gestures to indicate the breadth of the maple, "avec ses grandes branches étendues comme des bras ouverts," or a downward hand gesture to indicate the drops of sap flowing "au bas de l'entaille"). Certain vocabulary items may require further explanation (for example, "Le Grand Manitou" and "bouillir"). However, most of the vocabulary used in the legend to describe the basic sugaring-off processes (for example, "une entaille," or "un seau") should be readily understood by carefully holding up and placing the flannelgraph figures as the story is told.

Lesson 2: Review and Flashcard Presentation of Basic Sugaring-off Processes

Review:
Ask the class, *Qui a découvert le sirop d'érable?* Tell the legend, again being careful to move the figures in such a way as to illustrate the story line and the methods used to collect and boil the sap. Ask the class, *Quel est le cadeau du Grand Manitou?* Answer the question *Comment est-ce que les Indiens ont fait le sirop d'érable?* by summarizing section 7 of the legend (page 10 of the teacher's guide) while students either use mime or place the appropriate flannelgraph figures to illustrate the narrative.

Flashcard Presentation:
Using the flashcards to illustrate the basic principles of sugaring-off and to introduce additional new vocabulary in preparation for the filmstrip/tape, answer the question, *Comment est-ce qu'on fait le sirop d'érable aujourd'hui?* For example: Hold up flashcard of "un érable." *Qu'est-ce que c'est?* Place it on the blackboard ledge. Hold up "le temps des sucres." *Quel temps fait-il?* (*Il fait froid la nuit, mais le jour il fait beau.*) *Quelle saison est-ce?* (*C'est le printemps.*) *C'est le temps des sucres.* Place card next to "un érable" on blackboard ledge. Continue to hold up and place the remainder of the cards in a similar way. Thus:—

"Une érablière": *C'est le temps de recueiller l'eau d'érable dans l'érablière.*

"Une entaille": *Premièrement, on fait une entaille dans l'érable.*

"Un chalumeau": *Ensuite on met un chalumeau dans l'entaille.*

"Un seau": *Un seau est accroché au chalumeau. L'eau d'érable monte dans l'arbre* (this can be demonstrated by a simple diagram on the blackboard) *et cor e – ploc, ploc, ploc – dans le seau.*

"Un tonneau": *Quand il y a beaucoup d'eau d'érable dans le seau on la met dans un tonneau* (make a pouring gesture, as if from a heavy pail).

"Une cabane à sucre": *Un tracteur entraîne le tonneau à la cabane à sucre* (make a towing gesture).

"Une casserole": *Dans la cabane à sucre il y a une grande casserole sur le feu. On met l'eau d'érable dans la casserole. Qu'est-ce qu'il y a dans la casserole? (Il y a de l'eau d'érable . . .) De quelle couleur est l'eau d'érable? Est-ce que l'eau d'érable a une odeur? Est-ce que l'eau d'érable est sucrée?*

"Du sirop d'érable": *Qu'est-ce que c'est? Il faut quarante bouteilles d'eau d'érable pour faire une bouteille de sirop* (if necessary, write "40" on the blackboard), *parce que l'eau s'évapore pendant la cuisson* (indicate steam rising from pan). *L'eau s'évapore. Le sirop est à point! De quelle couleur est le sirop d'érable? Est-ce que le sirop sent bon? Est-ce que le sirop d'érable est plus sucré que l'eau d'érable? (Le sirop d'érable est délicieux!)*

Wrap-up Activities:
Place the aforementioned ten flashcards in a pile. Supply (in random order) a simple sentence which describes each step of the sugaring-off process ("L'eau d'érable coule dans un seau"; "C'est le printemps"; "On met l'eau d'érable dans une grande casserole," and so on), asking the students to select the appropriate card and place it on the blackboard ledge. It is not necessary for students to repeat the teacher's sentence. Repeat the above activity, but this time make the sentences more difficult ("Il y a beaucoup d'eau d'érable dans le seau"; "C'est le temps des sucres"; "L'eau s'évapore pendant la cuisson," and so on) and have the students take the appropriate card from the ledge to their desks. As a simple vocabulary review, have the students return the cards by asking, "Qui a *le seau*?", "Qui a *la casserole*?", and so on.

Lesson 3: Review and Filmstrip/Tape Presentation

Review:
Use the 10 flashcards from Lesson 2 for a quick review of the basic sugaring-off processes.

Filmstrip/Tape Presentation:
Discuss the importance of the maple sugar industry in the Province of Quebec, and explain to the students that the filmstrip/tape presentation they are going to see will show them the more modern methods of collecting and boiling sap as well as the traditional methods. You may want to introduce additional flashcards during this discussion ("la tire d'érable"; "des tuyaux de plastique"; "un évaporateur," for example), keeping in mind that passive recognition of these items is all that will be required. Added interest in the core presentation may be achieved by

telling the students that the voice on the tape is that of a French-Canadian girl of about their age.

Begin the filmstrip/tape presentation. The script and instructions for use are given on pages 11 to 13. As the core presentation (filmstrip and tape) requires approximately six minutes, it is advisable to allow a minimum of ten minutes for this part of the lesson. (If there is not sufficient time for the whole presentation, or if you feel your students will find it too much to handle all at once, it can be spread over two lessons by stopping the filmstrip after frame 20 and showing it in its entirety the following day.) As the frames are shown, use a pointer to indicate the items of importance. Set the relevant flashcards up on the blackboard, so that as each item shown in them appears in the filmstrip you can point to the item on both the filmstrip and flashcards. This can more easily be done if students run the projector and tape, freeing the teacher who can then point to the various items.

Lesson 4: Review of Filmstrip/Tape Presentation

After showing the filmstrip in its entirety, feel free to repeat sections of the presentation as often as necessary for the comprehension of the class. Where desired, the filmstrip can be used alone and comprehension questions asked. The following list suggests some of the possible questions which could be used. The actual wording of each question as well as the complexity of the answer desired will depend on the structures and vocabulary familiar to each individual class.

Frame	Questions
3	Que fait le garçon?
4 – 5	Qu'est-ce qu'on fait à une partie de sucre?
6	Est-ce que la tire d'érable est délicieuse?
8 – 9	Quel temps fait-il pendant le temps des sucres?
10 – 11	Où est-ce qu'il y a une entaille?
12	Où est-ce qu'on met le chalumeau?
13 – 14	Est-ce qu'il y a des insectes dans l'eau d'érable?
15,16,17	Que fait-elle? Que fait-il?
18	De quelle couleur est le tracteur?
19 – 20	Qu'est qu'on fait dans la cabane à sucre?
22,23,24, 25	Il y a deux manières de récolter l'eau d'érable. Regardez les tuyaux de plastique qui apportent l'eau d'érable à la cabane à sucre. Est-ce que c'est la manière traditionnelle?
27,28,29	Combien de bouteilles d'eau d'érable est-ce qu'il faut pour faire une bouteille de sirop? Pourquoi?
30	Combien de chaudrons y a-t-il sur le feu?
31	Est-ce qu'on prépare le sirop d'érable plus vite avec une grande casserole?
32 – 33	Est-ce que le feu doit bien flamber pour faire un bon sirop?
35,36,37, 38	Il y a deux manières de cuire l'eau d'érable. Regardez l'évaporateur dans cette cabane à sucre moderne. Est-ce que c'est la manière traditionnelle?
39 – 40	L'eau s'évapore pendant la cuisson. Est-ce que le sirop d'érable est à point?/Est-ce que le sirop d'érable est prêt?
41 – 42	Est-ce que tu aimes la crème glacée/ le jambon avec du sirop d'érable?
43	Est-ce que tu manges le toast avec du beurre d'érable?
44 – 45	Qu'est-ce que tu préfères, le sirop d'érable ou les bonbons de sucre d'érable?

FOLLOW-UP ACTIVITIES

The choice of follow-up activities is dependent upon the amount of time available to the teacher using this module and the specific interests of the various classes.

- Students re-tell the introductory story (individual students or in groups) using
  (i) flannelgraph story
  (ii) mime
- Make a mural depicting the stages of the sugaring-off process. The teacher may find it helpful to divide the mural, using French headings to depict each stage.
- Visit a sugar bush. (See pages 14 to 16 for a

selected list of available sugar bush areas.)
- Make a filmstrip or a film about the visit to a sugar bush. Complete it with some narration of the events.
- Play *loto* using new vocabulary. (*Loto* cards and teacher's *loto* set provided.)

LOTO

Most students have already enjoyed playing bingo, known as *loto* in French. The version of the game described here is played in the same way, except that it makes use of pictures instead of numbers.

Using the packet of master copies, make one copy of as many masters as there are students in the class. In this way each student will have a different *loto* card. Alternatively, you may wish to distribute the cards themselves to your students and not duplicate a class set each time the activity is used. In this case, however, teachers are advised to make one duplicate xeroxed set of the cards for use as master copies should the need arise, since replacement *loto* cards are unavailable.

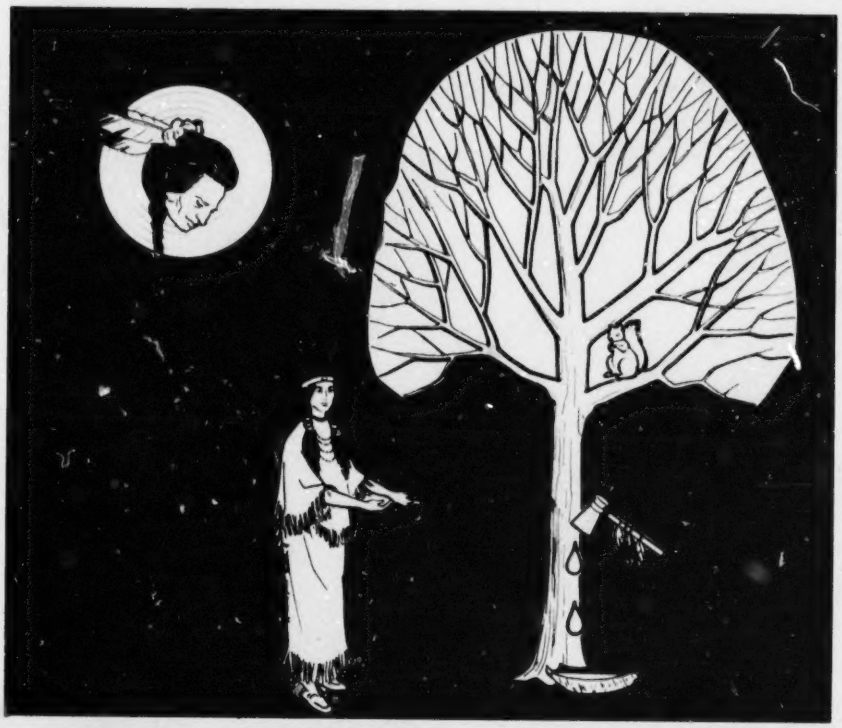
Hand out a *loto* card and one blank sheet of paper to each student. Have students prepare sixteen separate squares from the blank sheet, to be used to cover the picture on their *loto* card when it is called out. The teacher then draws *loto* cards from his cut-up sheet and calls out their names. As each word is called out the student puts a piece of paper over the appropriate square. The first student to fill in a straight line (horizontal or vertical) cries "*LOTO*!" and reads his card aloud for accuracy. When the class is very familiar with the vocabulary used in this game, the winner may become the caller in place of the teacher.

LE SECRET DES ERABLES — Une Legende

1.
Il était une fois une Indienne qui habitait un village près d'une forêt. Chaque matin elle se promenait dans la forêt en chantant une belle chanson. La jeune Indienne aimait bien les animaux de la forêt mais elle adorait les arbres.

2.
"De tous les arbres de la forêt," dit-elle, "je préfère cet érable, avec ses grandes branches étendues comme des bras ouverts."

3.
Un jour, au commencement du printemps, la jeune Indienne a vu un tomahawk logé dans son érable préféré. "Ce n'est pas un tomahawk de mon village. Qui a mis ce tomahawk dans l'érable? C'est peut-être le Grand Manitou?" Au bas de l'entaille fait par le tomahawk l'eau d'érable coulait – ploc, ploc, ploc – dans un morceau d'écorce de bouleau.



4.
L'Indienne a gouté l'eau d'érable. "Mmmm, c'est délicieux! Si sucré et si bon!"

5.
"Il y a beaucoup d'eau d'érable dans ce morceau d'écorce de bouleau. Je vais me dépêcher de rentrer au village pour préparer un dîner spécial pour le chef."

6.
Quand le chef des Indiens est revenu au village après la chasse, la jeune Indienne lui a servi un dîner délicieux.

Dès ce moment-là, les Indiens ont commencé à recueillir l'eau d'érable. Au commencement du printemps ils faisaient une entaille dans les érables à l'aide du tomahawk. Ils mettaient dans l'entaille un copeau de bois qui permettait à l'eau d'érable de couler goutte à goutte dans un seau en écorce de bouleau. Ensuite ils faisaient bouillir l'eau d'érable dans un chaudron. Le sirop d'érable était toujours délicieux!

8.
Et voilà comment on a découvert le secret des érables. Le bon sirop était vraiment un cadeau du Grand Manitou.

FLASHCARD VOCABULARY

1. un érable (de l'eau d'érable)
2. le temps des sucres (la partie de sucre)
3. une érablière
4. une entaille
5. un chalumeau
6. un seau
7. un tonneau
8. une cabane à sucre
9. une casserole
10. du sirop d'érable
11. la tire d'érable
12. des tuyaux de plastique
13. un chaudron
14. un évaporateur
15. du beurre d'érable
16. des bonbons de sucre d'érable
17. une Indienne
18. un tomahawk
19. le Grand Manitou
20. le chef des Indiens

FILMSTRIP/ TAPE PRESENTATION

EQUIPMENT

- Filmstrip projector and screen
- Cassette recorder

INSTRUCTIONS

The teacher should refer to the script as a guide to the sequence of filmstrip frames.

Filmstrip

1. Load filmstrip.
2. Turn to frame 1 (Credit).
3. Filmstrip projector is now ready for use.

Tape

1. Load tape.
2. Set volume control halfway.
3. Start tape. There will be a few seconds of silence followed by two beeps. The program will now begin.
4. Change filmstrip frame at each subsequent beep.

• • • • •

SCRIPT

No.	Frame	Narrative
2.	LE TEMPS DES SUCRES	LE TEMPS DES SUCRES
3.	Young child admiring bottles of maple syrup.	Ah, que j'aime le sirop d'érable! Regardez la belle couleur du sirop dans ces bouteilles. C'est le temps des sucres.
4.	Maple taffy pull at a sugaring-off party.	C'est le temps des parties de sucre.
5.	Fun in the snow.	Tout le monde s'amuse.
6.	Maple taffy pull.	Vite, le sirop d'érable est chaud. Versez-le sur la neige. Venez goûter la tire d'érable. Que c'est délicieux!

7.	I: LA RECOLTE DE L'EAU D'ERABLE – MANIERE TRADITIONNELLE	
8.	Sugar bush at evening.	Nous voici dans l'érablière. Regardez la neige – brrr, qu'il fait froid ce soir! Il va geler cette nuit.
9.	Drops of melted snow on a maple leaf.	Mais, c'est le commencement du printemps. Le jour il fait soleil, it fait beau et la neige fond. C'est le temps des sucres. Allons recueillir l'eau d'érable.
10.	Drilling a tap-hole.	Premièrement, il faut faire une entaille dans l'érable.
11.	Putting a germicidal pellet into the tap-hole.	N'oubliez pas de mettre une pilule microbicide dans l'entaille . . .
12.	Inserting a spile into the tap-hole.	avant d'y enfoncer le chalumeau.
13.	Pails hanging from the spiles.	Ecoutez: ploc, ploc, ploc. L'eau d'érable coule dans les seaux.
14.	Pail protected by a lid.	Il y a un couvercle sur chaque seau. Nous ne voulons pas trouver des insectes dans l'eau d'érable.
15.	Woman looking into a pail.	Ah bien, il y a beaucoup d'eau d'érable dans le seau.
16.	Man carrying the pail.	Vite, monsieur.
17.	Man pouring the sap into a gathering barrel.	Allez vider le seau dans votre grand tonneau.
18.	Barrel being hauled by a tractor.	Quel beau tracteur rouge pour entraîner le tonneau . . .
19.	Barrel at the sugaring-off house.	au réservoir de la cabane à sucre.
20.	Sugaring-off house at evening.	Regardez le soleil. Il est presque six heures. Demain on va retourner à la cabane à sucre pour la cuisson du sirop.
21.	I: LA RECOLTE DE L'EAU D'ERABLE – MANIERE MODERNE	
22.	Illustration indicating importance of Quebec maple syrup industry.	L'industrie du sirop d'érable est très importante au Québec. Aujourd'hui il y a une nouvelle technique pour la récolte de l'eau d'érable.
23.	Plastic tubing system.	C'est le système de tuyaux de plastique. Avec les tuyaux de plastique l'eau d'érable va directement . . .
24.	Plastic tubing attached to a maple tree.	de l'arbre . . .

25.	Sap being fed from the plastic tubing system into the reservoir of an evaporator.	au réservoir de la cabane à sucre. C'est très simple, n'est-ce pas?
26.	II: LA CUISSON DU SIROP – MANIERE TRADITIONNELLE	
27.	Children pouring sap into a gathering container.	Il faut quarante bouteilles d'eau d'érable . . .
28.	A bottle of maple syrup.	pour faire un bouteille de sirop . . .
29.	One kettle of sap over a fire.	parce que l'eau s'évapore pendant la cuisson. Alors, la cuisson du sirop demande beaucoup de temps avec un seul chaudron sur le feu.
30.	Three kettles of sap over the fire.	Ça va un peu plus vite avec trois chaudrons.
31.	A large pan of sap over a fire in the sugaring-off house.	Mais ça va beaucoup plus vite avec une grande casserole dans la cabane à sucre.
32.	Woman collecting wood.	Apportez beaucoup de bois s'il vous plait, Madame.
33.	Woman stoking the fire.	Le feu doit bien flamber pour assurer la cuisson d'un bon sirop!
34.	II: LA CUISSON DU SIROP – MANIERE MODERNE	
35.	Illustration indicating importance of Quebec maple syrup industry.	N'oubliez pas que l'industrie du sirop d'érable est très importante au Québec. Aujourd'hui il y a une nouvelle technique pour la cuisson du sirop.
36.	Evaporator house.	L'eau d'érable coule du réservoir de cette cabane à sucre bien moderne . . .
37.	The evaporator.	dans un évaporateur.
38.	Man stoking fire under the evaporator.	Sous l'évaporateur, le feu est bien chaud.
39.	Water vapor rising from boiling sap in one of the evaporator pans.	Dans l'évaporateur, l'eau d'érable coule d'une casserole à l'autre. L'eau s'évapore.
40.	A bottle of maple syrup.	Le sirop est à point!
41.	Maple syrup on ice cream.	Versez-le sur la crème glacée . . .
42.	Ham glazed with maple syrup.	ou sur le jambon.
43.	Maple butter on toast.	Faites du beurre d'érable ou . . .
44.	Maple sugar candies.	des bonbons de sucre d'érable.
45.	Pancakes and maple syrup.	Voulez-vous goûter ces crépes avec moi?

ADDITIONAL INFORMATION

Les Producteurs du sucre d'érable du Québec
2100, ave. St. Laurent, Plessisville, Québec,
G6L 2Y8

Metropolitan Toronto and Region Conservation Authority
Contact – David de Virti
Tel. 661-6600

Ontario Maple Syrup Producers Association
Box 157, Barrie, Ontario

Ontario Ministry of Agriculture and Food
Parliament Bldgs., Queen's Park, Toronto
Tel. 965-1056

B. Schloss, *La Cabane à sucre*. Mimeographed. n.d. Toronto: The Ontario Institute for Studies in Education.

The Sweet Taste of Spring. Edited by H. Jones and R. Bullock. Forest Valley Outdoor Education Centre, North York Board of Education
Tel. 630-6263

PLACES TO VISIT

New Brunswick

Mactaquac Provincial Park
Situated 17 miles north of Fredericton. Provides sugar bush tours and sleigh rides. A craft shop can be found at Opus village. Telephone: (802) 363-2300.

There are many privately owned sugar bush farms in New Brunswick. A short list is provided here. It is advisable to phone the owners/ operators ahead of time during the sugaring-off season.

Léonce Albert,
Notre-Dame des Erables,
Paquetville, N.B.
Telephone: 764-2887

Fidele Breau,
RR1, St. Isidore, Gloucester County,
nr. Tracadie, N.B.
Telephone: 358-2308

Paul Knox,
Crabbe Mountain (30 miles NW of Fredericton)
Telephone: 463-2603

Harold Love,
RR1, Mouth of Keswick,
York County, nr. Fredericton, N.B.
Telephone: 363-2335

Benoît Norneault,
Baker Brook, nr. Edmundston, N.B.
Telephone: 258-3246

Ontario

Most of the places listed in Ontario are conservation areas.
It is important that you check with each place before planning to visit; local newspapers may also list times and places during the sugaring-off season.

Horton Tree Farm Outdoor Education Centre
RR4, Stouffville, Ontario. Sugar bush tours – syrup making from Indian times to present – nature hikes, pancakes. School tours weekdays by appointment. Families welcome daily. From Toronto, go north on Woodbine to Aurora sideroad, follow signs one mile east, half a mile south. Telephone: (416) 887-5979.

The St. Lawrence Farks Commission, Upper Canada Village
Maple syrup demonstration at Crysler Park maple sugar bush. Located 6 miles east of Morrisburg at Crysler Park. Exit from Highway 401 at Interchange No. 120, Upper Canada Road. Open daily. Write Box 340, Morrisburg, Ontario.

Niagara Peninsula Conservation Authority
Maple demonstration bush. From Queen Elizabeth Way exit south on Victoria Avenue (Regional Road 24), through Vineland to gravel quarry, turn right at first road (Regional Road 73), and right again 1/2 mile. School tours weekdays by reservation. General public weekends. Pancakes, maple syrup, sugar bush tours, sleigh rides. Write Box 460, Fonthill, Ontario. Telephone: (416) 892-2621.

St. Clair Region Conservation Authority
Maple syrup demonstration at the A.W. Campbell Conservation Area, 1 1/2 miles east of Alvinston off Highway 79. Maple syrup festival March 19–20. Write 205 Mill Pond Crescent, Strathroy, Ontario, N7G 3P9. Telephone: (519) 245-3710.

Royal Botanical Gardens
Hamilton maple syrup exhibit. Located below the Niagara Escarpment at Rock Chapel, West Flamborough Township. Boiling operation will be explained and tours of the maple bush are available. A display of antique maple equipment will be on view at the Nature Centre. Write Box 399, Station A, Hamilton, Ontario. Telephone: (416) 527-1158.

Delta Maple Syrup Festival
Located on Highway 42, northeast of Kingston. Write Mrs. Sally Halladay, Secretary of the Delta Maple Committee. Delta, Ontario.

South Lake Simcoe Conservation Authority
Shepherds Bush Conservation Area — off Industry Street, Aurora. Syrup-making demonstration, pioneer and modern methods. Tours and self-guiding trails. Maple products for sale. Pancakes every weekend. Telephone: (416) 895-1281.

Metropolitan Toronto and Region Conservation Authority
Bruce's Mill Conservation Area demonstration bush, 2 miles east of Don Mills Road on Gormley-Stouffville sideroad. Demonstrations of old and new methods of maple syrup making, pancakes, and maple products for sale. Telephone: (416) 661-6600.

Metropolitan Toronto and Region Conservation Authority
Kortright Sugarbush, Boyd Conservation Area near Kleinberg, entrance on Pine Valley Drive, just south of Major McKenzie Drive, 2 miles west of Highway 400. Telephone: (416) 661-6600.

Kettle Creek Conservation Authority
Maple syrup demonstration at Lake Whittacker Conservation Area. Eighteen-acre bush with trails; syrup-making, old and modern. Contact Kettle Creek Conservation Authority, RR8, St. Thomas, Ontario. Telephone: (519) 631-1270.

Pancake and Maple Syrup Festival, sponsored by Maple Lions Club, Maple
Located east of Highway 400, off the Maple sideroad. Conducted tours of Robson's Sugar Bush, bake sale, antiques, arts and crafts, entertainment for the children, pancakes and sausages served with maple syrup. School tours and visitors welcome throughout the season at the sugar bush. Write Maple Lions Club, Maple, Ontario.

Elmira Maple Syrup Festival
Located about 12 miles north of Waterloo on Highway 85. Pancakes and maple syrup. Sugar bush tours, Farmers' Market, handicraft sale. Contact Elmira and District Chamber of Commerce, Elmira, Ontario. Telephone: (519) 669-2605.

Orillia Maple Syrup Festival
Located approximately 80 miles from Toronto on Highway 11. Pancakes, sausages, and maple syrup served at the Community Centre, West St. North. Sugar bush tours, craft display, maple products for sale. Open from 8 a.m. to 6 p.m. Write Box 520, Orillia, Ontario.

West Oxford Women's Institute
Annual Maple Syrup Festival at George Jakeman's sugar bush, 3 miles south of Woodstock and 2 miles west or 1 mile north of Seaburg. Maple products, pancakes, home baking, and crafts.

Elmvale Maple Festival
Located 16 miles north of Barrie on Highway 27. Sugar bush tours, street booths, midway. Pancakes and maple syrup served in Community Hall. Write Box 340, Elmvale, Ontario. Telephone: (705) 322-2233.

Belmore Maple Festival
Located about 10 miles northeast of Wingham, Ontario. Pancake dinner, tour of sugar shack.

Algonquin Maple Festival, Sundridge
Located on Highway 11 halfway between Huntsville and North Bay. Pancakes and sausages from 11 a.m. to 7 p.m. Sugar bush tours, guaranteed supply of maple products for sale. Write Box 179, Sundridge, Ontario. Telephone: (705) 384-5567.

Otonabee Region Conservation Authority Maple Demonstration Bush
Seventeen miles northeast of Peterborough, Ontario, on the County Road 4, just north of Warsaw. Demonstration of syrup making. Maple syrup for sale. Pancakes. Telephone: (705) 745-5791.

Ontario Maple Syrup Producers Association
Privately owned maple syrup areas.
Give each area a call to see what is happening during the day.

G. Armstrong,
RR2, Bracebridge, Ontario
Telephone: 645-5945

R. Carter,
RR3, Orillia, Ontario
Telephone: 326-4879

Lesley Frost Natural Resource Centre,
Dorsett, Ontario
Telephone: 766-2451, by reservation.

Maple Wood Farm,
Robertson Family,
RR2, Hespeler, Ontario
Telephone: 334-3686

Quebec
A list of between 180 to 190 sugar bush places to visit in Quebec can be found in the 1977 publication booklet of the Quebec Department of Agriculture, *Where To Go For Sugaring Parties*. The booklet lists the region, address, person to contact, and telephone number, together with information on how to get there, approximate dates of the activities, and services and products provided.

The publication can be obtained from: Service de l'Information, Ministère de l'Agriculture du Québec, 1140, rue Taillon, Québec, P.Q. Telephone: (418) 643-2516.

Vermont
The following agency may be of aid in providing a list of sugar bush places to visit in Vermont: Office of Information, Agency of Development and Community Affairs, 61 Elm Street, Montpelier, Vermont, 05602, USA. Telephone: (802) 828-3236 (Travel Division).

FURTHER READING MATERIALS

Bjorklund, K. L. *The Indians of North America*. New York: Dodd Mead & Co., 1971.
Fletcher, S. E. *The American Indians*. New York: Grosset & Dunlap, 1962.
La Farge, O. *A Pictorial History of the American Indian*. Rev. ed. New York: Crown, 1974.

ACKNOWLEDGMENTS

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The music is taken from the record *Folklore de chez nous*, recorded by la troupe folklorique Les Sortilèges inc., distributed by Trans-Canada Music Services Inc.

Filmstrip Credits
G. J. Harris: 9, 15, 16, 17, 18, 19, 20, 31, 32, 33
Miller Services: 4
Ministère de l'Agriculture, Québec, P.Q.: 5, 6, 22, 23, 35, 36, 38
The Ontario Institute for Studies in Education: 1, 2, 7, 21, 26, 34
Ontario Ministry of Agriculture and Food: 3, 10, 11, 12, 13, 14, 24, 25, 27, 28, 29, 30, 37, 40, 41, 42, 43, 44, 45
Margaret Ross: 8, 39

LISTENING COMPREHENSION TEST

The test was used in evaluating *Le Temps des sucres* before it was published. It has been tried out on a hundred students within the grade age and ability range of the target audience and proved to be valid and sufficiently reliable for classroom use (Hoyt estimate of reliability .62). It is not meant to be exhaustive; rather it represents the minimum that the teacher can expect students at the level of the target audience to achieve after being exposed to the module for five to seven class periods of fifteen to twenty minutes.

TESTING PROCEDURES

Each student is provided with a copy of the test paper consisting of three sheets to be duplicated from the masters found immediately following. There are ten questions with three pictures to each question. An example question is included. The sentences for each question are to be found on the tape, after the sound track of the filmstrip. Each sentence is read twice and the students are to mark a cross on the picture in each row which the sentence best describes. The teacher reads the test instructions to the students and makes sure they understand them before starting the test. For convenience, the questions and the keys to the test are included below. If the students need more time to complete an item than is allowed on the tape, the teacher may stop the tape at that point until everyone has finished.

INSTRUCTIONS

"We're going to play a game. Each of you has three sheets with rows of pictures; the first row is marked EXAMPLE. Each of the following rows has a letter, A, B, C, and so on. Does everyone see that . . . I will play the tape; you will hear a man who will tell you the letter of the row to look at each time. Then a woman will say a sentence in French *two times*. You will listen carefully, then look at the pictures in that row and decide which *one* the sentence is talking about. Then you will mark a cross on that picture.

"I will give you an example. Look at the row next to the word EXAMPLE and listen:

'Voilà un seau' (repeat)

"Which picture do you think the sentence is talking about? (Teacher may try to elicit responses from the students at this point.) The first picture is "une casserole," the second picture is "un chaudron," and the third picture is "un seau." The correct answer is the third picture, "un seau." You should mark a cross on the third picture. Does everyone understand? Remember, put a cross on only *one* picture."

Teacher now starts the section of the cassette tape containing the questions. Transcript of the questions as they appear on the tape and keys follows.

• • • • •

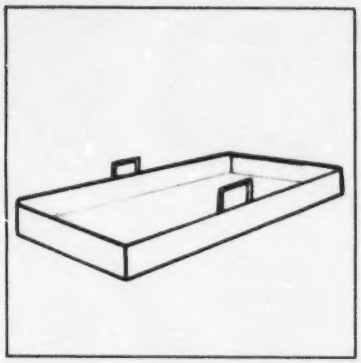
TRANSCRIPT

	KEYS
Now look at row A and listen. "Il fait froid, mais il fait soleil. C'est le temps des sucres."	
Listen again and mark a cross on the picture that the sentence is talking about. "Il fait froid, mais il fait soleil. C'est le temps des sucres."	Picture 2
Now look at row B and do the same. "Nous voici dans l'érablière." (repeated)	Picture 3
Now look at row C. "Jean fait une entaille dans l'érable." (repeated)	Picture 3
Now look at row D. "Il met le chalumeau dans l'entaille." (repeated)	Picture 1

Now look at row E. "L'eau d'érable coule dans le seau." (repeated)	Picture 2
Now look at row F. "Jean fait bouillir l'eau d'érable dans un chaudron." (repeated)	Picture 2
Now look at row G. "Avec la technique moderne, il y a des tuyaux de plastique." (repeated)	Picture 1
Now look at row H. "L'eau d'érable va de l'arbre à la cabane à sucre." (repeated)	Picture 1
Now look at row I. "Dans la cabane à sucre, il y a un évaporateur." (repeated)	Picture 3
Now look at row J. "L'eau d'érable s'évapore dans les casseroles." (repeated)	Picture 2

Master Copies

EXAMPLE



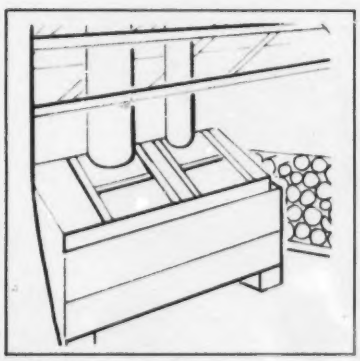
A.

1.

2.

3.

B.



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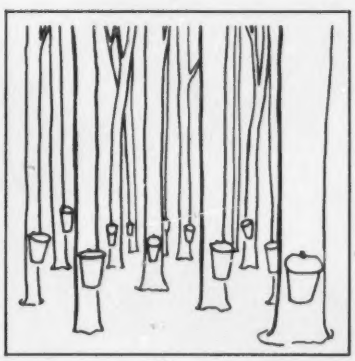
2.



3.

C.

1.

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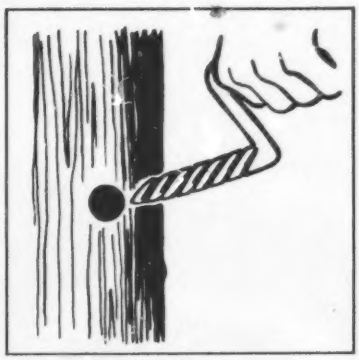

3.

D.

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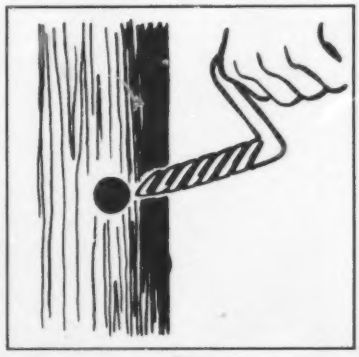
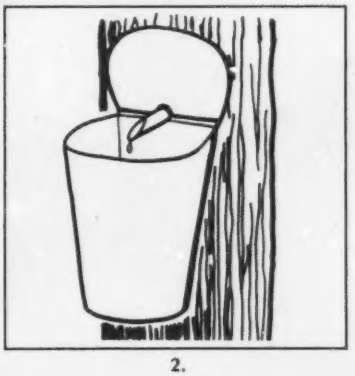


3.

E.

1.



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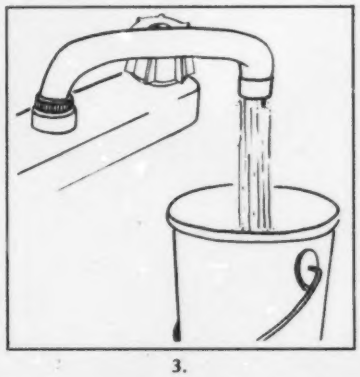

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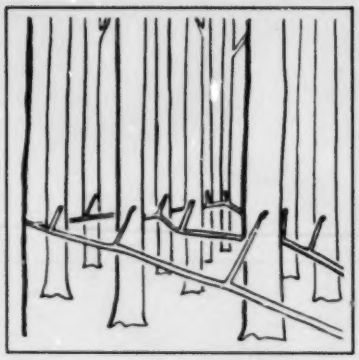
G.



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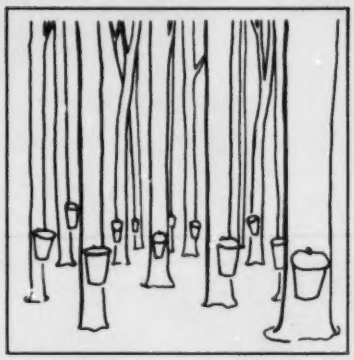

2.

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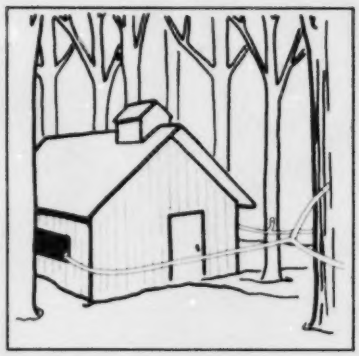
H.



1.

2.

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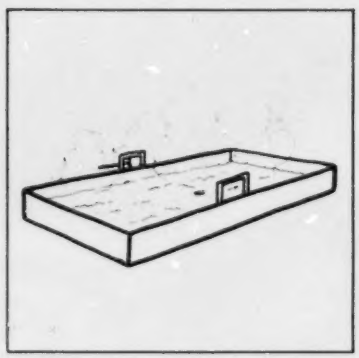
I.



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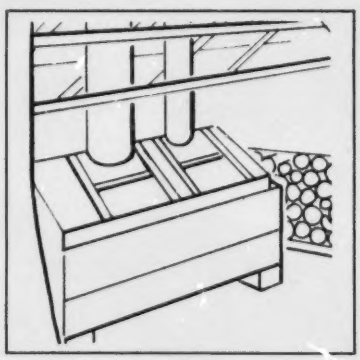
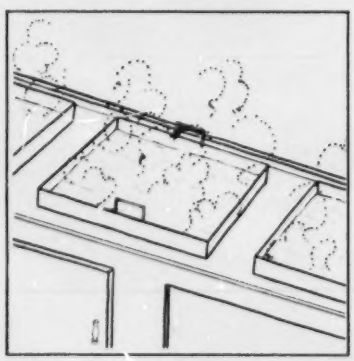


3.

J.

1.



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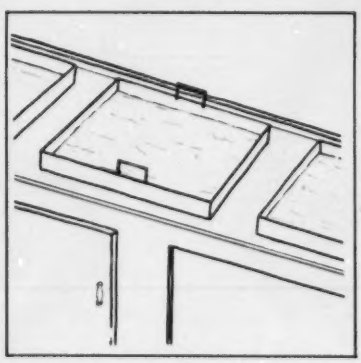

3.

THE MAPLE SUGAR INDUSTRY

Background

Maple syrup was discovered by the Canadian Indians. According to legend, an Indian maiden found a tomahawk lodged in the side of a maple tree. From the gash in the tree's side created by the tomahawk, drops of maple sap, or "sweet water," were falling into a curved piece of bark lying on the ground below. The Indian maiden stopped to taste the liquid in the piece of bark and found it so delicious that she used it in cooking venison for her delighted brave.

Whatever truth lies in this legend, we know that the Indians were making maple syrup long before the white man's arrival in North America. They had learned how to make a cut in the trunk of a maple and insert a chip of wood to direct the drops of "sweet water" into a birchbark container at the foot of the tree. (This is known as "tapping.") They had also learned how to boil the sap in clay pots to produce maple syrup and maple sugar.

The pioneers learned to make maple syrup from the Indians. As cane sugar was very expensive, the settlers used maple sap to produce sugar for their own needs. It was not until about eighty years ago, however, that maple syrup began to be produced on a commercial basis.

The Collecting of the Sap

After the warm, sunny days of spring have arrived, but before the cold, frosty nights of winter have gone (usually in early March), a build up of pressure causes the sap to begin to flow in the trees, and preparations are made in sugar bushes for tapping the maples. These are the ideal weather conditions — in turn periods of freezing and thawing without extreme changes. The tapping is carried on, without a stop or at different times, for as long as this weather lasts — usually about a month. Over the summer a new supply of sugar will be built up by the action of sunlight on the chlorophyl of the leaves. The sugar will be stored in the maple trees until it is dissolved

by the sap the following spring. Although syrup can be made from the sap of all maples, sugar maples produce the best quality, followed by black and red maples. The sugar maple is a commercially valuable tree native to Canada. It is found from the Maritime Provinces to Lake of the Woods and southwestern Ontario, and south of the border to Ohio. Sometimes reaching a height of 40 m and a diameter of 150 cm, the average mature sugar maple is 25 to 28 m high with a diameter of 60 to 92 cm. Its leaf usually has five lobes, occasionally only three. In autumn its fiery red foliage makes the sugar maple one of the most beautiful trees in the forests of eastern Canada.

Ideally, a sugar bush should contain sugar maples which are far enough apart to develop large sap-producing tree tops, yet close enough together to make collecting practical. Maples less than 25 cm in diameter when measured 140 cm above the ground should not be tapped. Trees with a diameter of 25 to 35 cm can have one tap-hole; 38 to 48 cm, two tap-holes; 51 to 61 cm, three tap-holes; 64 or more centimetres, four holes. As long as the maple trees are not overtapped, tap-holes do not harm them. At the end of each sugaring-off season, the holes are scraped clean and plugged with corks. An average maple produces 68 to 90 litres of sap.

Thus, in a well-managed sugar bush the balance of nature is respected as much as possible. The bush provides an excellent means of protecting such natural resources as well as more income for farmers during an otherwise slow season.

There is more than one method used to collect sap and to boil it to make maple syrup. Some methods are more modern than others. Many sugar bushes rely partly on modern, partly on older, more traditional methods. For example, a sugar bush may use a modern evaporator for boiling the sap, yet still use a traditional method for collecting it. Where traditional methods are still used, they incorporate improvements to ensure the quality and purity of the syrup. For example, plastic or aluminum utensils have replaced those of wood, iron, or tin. Quebec has strict regulations governing the production

of maple products and it is the only province that maintains a laboratory specifically for the analysis of maple products.

All methods of collecting sap, whether modern or traditional, are founded on the same basic principle as the Indian system:

1. A hole must be drilled in the trunk of the tree, one cm wide and about 5 cm deep, with a slight upward slope. The traditional method uses a tool called an auger to drill the hole. The modern method uses a gasoline or electric drill. A germicidal pellet may be put in each tap-hole to prevent microorganisms from entering.

2. A spout, or spile, must be inserted into the hole to direct the drops of sap, which, on a good day will flow almost immediately. The traditional method uses wooden or metal spiles. The modern method uses plastic or aluminum spiles to prevent lead contamination.

3. The sap must be transported from the spile to a storage tank. The traditional method catches the drops of sap in wooden or metal pails which are hung from the spiles. Most of these pails are now made of plastic or aluminum and are covered with lids to keep out snow, rain, dust, insects, and other foreign matter. When the pails are full, they are emptied into a gathering tank that is hauled by horse or by tractor to the spot where the sap will be boiled — today usually a sugar evaporator house. The labor-saving modern method feeds the drops of sap into a system of plastic tubing, which may carry the sap (either by gravity or by pump, depending on the lie of the land) directly to the reservoir of the evaporator house.

The Boiling of the Sap

As soon as a sufficient quantity of sap has been collected, the actual production of maple syrup begins. It takes about 180 litres of sap to make about 4.5 litres of syrup

Maple syrup is composed of 34.54 percent water and 65.46 percent solids. The solids are mostly carbohydrates, but syrup

contains up to one percent mineral substances that are essential in the development of human bones and tissues. Thus maple syrup is superior in food value to ordinary sucrose. The percentage of solids in maple sap can be determined by looking at a drop of sap through an instrument called a refractometer This percentage remains constant from year to year for the same maple tree.

As in the case of the collecting of sap, all methods for boiling sap, whether traditional or modern, are founded on the same basic principle as the Indian system:

1. The sap must be heated so that most of the water content is boiled away. Originally the "sweet water" was simply boiled in an iron kettle over an open fire. This required an enormous amount of time and effort. Later, several kettles were used and the sap was moved from one kettle to another as the evaporation process progressed, making it possible to produce larger amounts of a better quality syrup. The next innovation was a large, shallow, flat-bottomed tin pan with an enclosed fire box. This was more efficient than kettles for boiling sap, but it still did not entirely prevent ashes and smoke from affecting the color and flavor of the syrup. In the modern method, the sap is fed from a reservoir into a wood- or oil fired evaporator in an evaporator house. The most modern evaporator has a cover and a steam stack as well as a smoke stack. The evaporator itself consists of long aluminum pans with either flat or corrugated (wavelike) bottoms. The pans have been designed so as to keep the boiling liquid moving across the surface as well as lengthwise. Clouds of water vapor rise from the boiling sap during the process of evaporation. Evaporation continues until a temperature of 104°C (at sea level) has been reached and the sap has become syrup. Colorless and without odor in its natural state, the "sweet water" undergoes a chemical reaction during boiling which produces the characteristic aroma, color, and flavor of maple syrup.

2. While the syrup is still hot, it is filtered, packaged, and then graded according to color and taste. The hot syrup must be at least 82° C in order to sterilize the tins used in packaging. Syrup with the darkest color has the strongest flavor and is therefore recommended for cooking.

If the syrup is to be kept for personal use or sold directly to the customer, it is usually bottled or canned in half-litre containers. These containers are easy to handle and prevent loss of flavor. This method of packaging is used by operators of smaller sugar bushes, usually those with fewer than a thousand tap-holes. In the case of larger sugar bushes, the syrup is usually made for the wholesale market ("wholesale" means that the article is sold in large amounts to a merchant who will then sell it to his customers) and is poured into large metal storage barrels.

3. All the utensils used in the production of maple syrup (spiles, pails, tubing, gathering and storage tanks, and so on) are sterilized before being put away or reused.

Maple Products

Maple syrup can be enjoyed by itself or on cereal, pancakes, waffles, bread, French toast, ice cream, cakes, berries, and so on. It can also be used in preparing many dishes where sweetening is desired — eggnogs, glazed meats (especially ham), carrots, sweet potatoes, sauces. Maple syrup should be stored in a cool, dry place. Once the container has been opened, it should be recapped and kept in the refrigerator or freezer.

Other maple products are maple sugar, maple butter, and maple taffy (tire), all of which can also be used in a variety of ways.

Maple Sugar

Maple sap contains 2.5 to 3 percent sugar. Maple sugar is made by heating maple syrup to temperatures of 114° to 118°C in a separate pan where the heat can be closely controlled, and

where the syrup can be stirred to prevent its burning. It is sold in two forms: loaf sugar, which can be broken into pieces and used as candy, and granulated sugar. Loaf sugar can be softened by placing it on a pie plate and heating it in a 150°C oven for about ten minutes.

Maple Butter

Maple butter is made by heating maple syrup to a temperature of 114°C, allowing it to cool to room temperature, and then stirring it until crystallization begins. Maple butter can be used as a spread on pancakes, waffles, bread, French toast, cakes, and cookies. It is also a tasty filling for fruits such as prunes, dates, and figs, or for cream puffs and éclairs. As a frosting, it is good on cakes, cookies, doughnuts, sweet rolls, fruit and nut breads, or it may be served as a sauce on puddings, fruit cakes, and other desserts. It should be kept in a tightly covered container to prevent drying.

Maple Taffy

Maple taffy is also made by heating maple syrup to 114°C. Success in making it depends largely on the percentage of inverted sugar or levulose in the sap. Inverted sugar is a form of sugar which does not crystallize. If maple taffy is sealed in cans, cooled rapidly, and frozen before crystals form, it can be kept in the freezer for one year. If it is poured, still hot, into a basin of clean snow, it can be twisted around wooden pallets and you will taste one of the greatest delights of the sugaring-off season.